

NOTICE OF INACTIVATION
FOR NEW DESIGN

INCH POUND

MIL-B-63354A
NOTICE 1
14 MARCH 1997

MILITARY SPECIFICATION

BORESCOPE, M3

This notice should be filed in front of MIL-B-63354A, dated 20 October 1987

MIL-B-63354A, dated 20 October 1987 is inactive for new design and is no longer used, except for replacement purposes.

Custodians:
Army - AR

Preparing Activity
Army - AR

Review activities:
Navy - MC

(Project 6650-0212)

AMSC N/A

FSC 6650

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MIL-B-63354A
20 OCTOBER 1987
SUPERSEDING
MIL-B-63354
17 March 1978

MILITARY SPECIFICATION

BORESCOPE M3

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification supports the acquisition of a portable optical borescope for the inspection of cannon bores from 58mm (2.3 in.) to 203.2mm (8 in.) in diameter. This specification includes the minimum essential Engineering and Packaging Requirements and the necessary Quality Assurance Provisions to determine that these requirements have been met.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS), and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Research and Engineering Center, US Army Armament, Munitions and Chemical Command, ATTN: SMCAR-CCB-SAS, Watervliet, NY 12189-4050, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

SPECIFICATIONS

MILITARY

- MIL-G-174 - Glass, Optical
- MIL-C-675 - Coating of Glass Optical Elements, Anti-Reflection
- MIL-A-3920 - Adhesive; Optical, Thermosetting
- MIL-O-13830 - Optical Components for Fire Control Instruments; General Specification Governing the Manufacture, Assembly, and Inspection of
- MIL-I-45607 - Inspection Equipment, Acquisition, Maintenance and Disposition of

STANDARDS

FEDERAL

- FED-STD-H28 - Screw Thread Standards for Federal Services

MILITARY

- MIL-STD-109 - Quality Assurance Terms and Definitions
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-130 - Identification Marking of U.S. Military Property
- MIL-STD-2073-1 - DoD Materiel Procedures for Development and Application of Packaging Requirements

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified in the solicitation, the issues shall be those in effect on the date of the solicitation.

DRAWINGS

U.S. Army Armament Research, Development and Engineering Center

IL 11584701 - Index List; Borescope M3

SPI AM11584701 - Special Packaging Instructions; Borescope M3

MASTER LQAP
11584701 - Master List of Quality Assurance Provisions; Borescope M3

IL 11584702 - Objective Tube Assy

IL 11584705 - Case, Borescope (Exterior)

IL 11584706 - Adapter Tube Assy

IL 11584733 - Extension Tube I Assy

IL 11584734 - Extension Tube II Assy

IL 11584735 - Extension Tube III Assy

IL 11584801 - Support Assy

IL 11584810 - Blind Head Assy, Illuminating Head, Blind

IL 11586099 - Illuminating Head Assy

PUBLICATIONS

Cataloging Handbook H4-1 - Federal Supply Code for Manufacturers (US and Canada) Name to Code

Cataloging Handbook H4-3 - NATO Supply Code for Manufacturers (excluding US and Canada) Name to Code

QAP-APPENDIX-WVA - General Quality Assurance Provisions

(Copies of specifications, standards, handbooks, drawings, publications, and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the Procuring Contracting Officer.)

NATIONAL BUREAU OF STANDARDS

Special Publication SP-374 - Methods for Determining the Resolving Power of Photographic Lenses

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. Unless otherwise specified in the solicitation, the issues of the documents which are DOD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified in the solicitation, the issues of documents not listed in the DoDISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B46.1 - Surface Texture

(Application for copies should be addressed to American National Standards Institute, 1430 Broadway, New York, NY 10018.)

(Nongovernment standards and other publication are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. The applicable contract contains an order of precedence clause wherein the specifications are listed last. With respect to this specification, the order of precedence is as follows:

- a. Engineering (configuration) drawings
- b. Special Packaging Instructions (SPIs) or Packaging Data Sheets (PDS)
- c. The text of this specification
- d. Quality Assurance Provisions (QAPs)
- e. Gage drawings
- f. All other referenced specifications and documents.

Nothing in this specification shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General requirements, materials, parts, optics, coatings, and finishes. Borescope and component parts thereof shall conform and be in accordance with the applicable contract and shall conform to the drawings referenced in IL 11584701, this specification, MIL-O-13830, MIL-G-174, MIL-C-675, MIL-A-3920 and other applicable documents.

3.1.1 Threads. Screw threads shall conform to the applicable drawings and FED-STD-H2B.

3.2 First Article. The contractor shall submit a first article unless it is specifically waived in the contract (see 4.4 and 6.2). No first article requirements shall be waived without review and approval by the Procuring Contracting Officer (see 6.5).

3.3 Borescope. The Borescope consists essentially of the following assemblies in a carrying case.

- a. Eyepiece
- b. Adapter Tube
- c. Extension Tube I
- d. Extension Tube II
- e. Extension Tube III
- f. Objective Tube
- g. Illuminating Head
- h. Blind Head
- i. Supports
- j. Electrical cords

3.3.1 Extension tube assemblies. Each of the three extension tube assemblies shall be made up of two interconnecting tubes, each containing an erector lens.

3.3.2 Objective tube assembly. The objective tube assembly shall consist of two interconnecting tube assemblies, one with an objective lens and an erector lens, and the other with an erector lens only.

3.4 Design. Borescope assemblies and parts shall conform to the design specified on the applicable drawings referenced in IL 11584701. If dimensions in addition to those specified on the applicable drawings are required, the contractor shall request clarification from the Procuring Contracting Officer. In no case shall drawings be scaled to obtain dimensions.

3.5 Optical system.

3.5.1 Eyepiece focus. The axial travel of the eyepiece between its positions when focused on infinity and 2 inches from the end of the objective tube shall be 0.310 inch maximum. This range of adjustment shall be obtainable with one, two and three extension tube assemblies added to the objective tube assembly.

3.5.2 Image size. The image of a 6 inch diameter circular object, axially located 10 inches from the objective end of the objective tube assembly, shall be between 0.440 inch and 0.660 inch in diameter at the focal point of the eyepiece assembly. This shall apply for the borescope utilizing three, two, one or no extension tube assemblies.

3.5.3 Image location.

3.5.3.1 Objective tube assembly. The image of an axial object located at infinity (more than 15 feet from the objective end of the objective tube assembly) shall be located between 4.730 inches and 4.940 inches beyond the male end of the objective tube assembly.

3.5.3.2 Extension tube assembly (I, II, and III). For each of the three extension tube assemblies, the image of an object placed 8.360 inches into the female end of the extension tube assembly shall be located between 4.730 inches and 4.940 inches beyond the male end of the extension tube assembly.

3.5.4 Centering and field of view. The cutoff of the field of view by any aperture in the borescope shall be such that an 11.125-inch diameter circle, centered and placed at a distance of 10 inches from the objective end of the objective tube assembly, shall be fully visible at any radial position of the borescope as the borescope is rotated 360 degrees about its longitudinal axis. This shall apply utilizing three, two, one or no extension tube assemblies.

3.5.5 Cleanliness. No opaque material (dirt, dust particles, etc.) shall be visible in the focal plane of the complete borescope throughout the entire range of eyepiece movement. With the eyepiece removed, the area of opaque material on the remaining lenses of the complete borescope shall not total arithmetically to more than 1.0 square millimeter in area. Also, there shall be no evidence of condensation of moisture on or in the complete borescope or on any lens thereof.

3.5.6 Resolution. With the borescope utilizing one, two, or three extension tube assemblies, a target consisting of pattern 28 of Figure 2 of National Bureau of Standards (NBS) SP-374 placed at a distance of 60 inches from the objective lens of the objective tube assembly shall be resolvable (corresponding to a resolving power of 2.00 arc minutes). With the objective tube assembly only, a target consisting of pattern number 34 of Figure 2 of National Bureau of Standards (NBS) SP 374, when placed at a distance of 60 inches from the objective lens of the objective tube assembly, shall be resolvable (corresponding to a resolving power of 1.66 arc minutes).

3.6 Electrical system.

3.6.1 Continuity. The continuity of each circuit of the electrical system shall be demonstrated.

3.6.2 Insulation resistance. The insulation resistance at 500 VDC between each circuit and ground shall be 50 megohms to infinity. The insulation resistance at 500 VDC between circuits shall be 20 megohms to infinity.

3.7 Function. All optical, mechanical, and electrical assemblies, subassemblies, and components shall be fully capable of performing their intended function as required by this specification, referenced specifications, item QAPs (Quality Assurance Provisions), and applicable drawings.

3.8 Marking. Parts and assemblies shall be clearly and legibly marked in accordance with the requirements of the applicable drawing, this specification, and MIL-STD-130.

3.8.1 Size of marking. The size of characters, when not specified on the drawing, shall be 0.10 inch minimum except where the area available for marking is too small, then the largest characters consistent with the available area shall be used.

3.8.2 Type of marking. Letters shall be without serifs (sans-serifs) such as "Gothic" or "Futura" capitals, and the numerals shall be Arabic. Other characters shall be of similar appearance.

3.8.3 Methods of application. Unless otherwise specified on the drawing or in the contract, marking shall be directly applied to the surface of the item by metal stamp, embossing, engraving, forging, casting, molding or silk screen.

3.8.3.1 Caution. Marking of items shall not affect the life and utility of the item. Marking materials creating hazardous conditions shall not be used.

3.8.4 Time of marking. Marking involving alteration of the item surface (stamping, engraving, embossing and the like) shall be done before application of any specified protective coating (anodize, phosphate, oxide, paint, etc.) and shall be legible after application of the coating. Items showing marking requirements at assembly (weldments, sheet metal fabrications, and like assemblies) may have the marking applied to the detail part before assembly to facilitate manufacture.

3.8.5 Manufacturer's identification. Unless otherwise specified, all parts and assemblies requiring marking shall also be identified with the manufacturer's code identification (FSCM) number, name or registered trademark prefixed by "MFR"; and located below the design activity code identification and part numbers. Manufacturer's code numbers are listed in Cataloging Handbooks H4-1 and H4-3. Directions for obtaining numbers are as specified therein.

Part Example: 19206 - 1234567
MFR 54321

Assembly Example: 19206 ASSY 1234567
MFR 54321

3.8.6 Lot numbers. When assigned by the contracting officer, lot numbers shall be engraved after the manufacturer's name, code or trademark on the following assemblies:

Adapter Tube	11584706
Extension Tube I	11584733
Extension Tube II	11584734
Extension Tube III	11584735
Objective Tube	11584702
Illuminating Head	11586099
Blind Head	11584810
Supports	11584801

3.8.7 Serial numbers. Serial numbers, when assigned by the contracting officer, shall be applied to the case as specified on drawing 11584705.

3.8.8 Permanency and legibility. The information marking on parts, assemblies, sub-assemblies, units, sets or groups, shall be as permanent as the normal life expectancy of the item and be capable of withstanding the environmental tests and cleaning procedures specified for the item. The information marking shall be of a color that is in contrast to the color of the surface of the identification plate. Identification tag marking, when used, shall be permanent to the extent required for utilization of the item.

3.9 Workmanship. Workmanship during the fabrication and assembly of the borescope shall be equal to or better than the industry standards used by reputable firms producing similar optical equipment. The following requirements also apply.

3.9.1 Functioning surfaces. Contact surfaces shall be free of steps, burrs, projections, and other irregularities that affect the functioning and fit of the parts. Burrs and fins shall be removed to avoid hazards in handling.

3.9.2 Exposed surfaces. Surfaces not in contact with other parts shall be true to specified contours and free of visible irregularities and defects that adversely affect strength and serviceability or detract from good appearance.

3.9.3 Surface roughness. Surface roughness shall be as specified on the applicable drawings and shall be in conformance with ANSI B46.1.

3.9.4 Protection. All surfaces shall be effectively protected against contamination, corrosion and damage during manufacture, assembly, in-process, final inspection, and delivery.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to the prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.2 Quality assurance terms and definitions. Quality assurance terms and definitions as used in this specification are in accordance with MIL-STD-109.

4.3 Classification of inspection. The inspection requirements (examinations and tests) specified herein are classified as follows:

- a. First Article Inspection (see 4.4).
- b. Quality Conformance Inspection (see 4.5).

4.4 First article inspection.

4.4.1 Quantity. Unless otherwise specified in the contract, (see 6.2), the contractor shall submit a first article quantity in accordance with the applicable item QAP. Item QAPs are listed on MASTER LQAP 11584701.

4.4.2 Inspection provisions. The first article shall be representative of the production processes to be used during quantity production. The first article shall be subjected to quality conformance inspection (see 4.5), first article requirements and inspection in accordance with applicable item QAPs in order to determine compliance with all requirements of the contract, and applicable drawings and specifications.

4.5 Quality conformance inspection. Quality conformance inspection is listed in Table I.

TABLE I. Quality conformance inspection.

<u>Category/characteristic</u>	<u>Requirement Paragraph</u>	<u>Inspection Paragraph</u>
Materials, parts, optics, coatings, finishes	3.1, 3.1.1	4.5.3, 4.5.4
<u>Optical element</u>		
Surface quality	3.1	4.5.4.1
Surface accuracy	3.1	4.5.4.2
<u>Borescope optical system</u>		
Eyepiece focus	3.5.1	4.5.5.1
Image size	3.5.2	4.5.5.2
<u>Borescope image location</u>		
Objective tube	3.5.3.1	4.5.5.3
Extension tube I, II, III	3.5.3.2	
<u>Borescope</u>		
Centering and field of view	3.5.4	4.5.5.4
Cleanliness	3.5.5	4.5.5.5
Resolution	3.5.6	4.5.5.6
Electrical system	3.6	4.5.6
Function	3.7	4.5.7
Marking	3.8	4.5.8
Workmanship	3.9	4.5.11
Packaging	5.	4.5.12

4.5.1 Inspection provisions. Borescopes, subassemblies, components and parts thereof shall be inspected in accordance with this specification, QAPs listed on MASTER LQAP 11584701, and QAP-APPENDIX-WVA.

4.5.2 Inspection equipment. Drawing numbers of inspection equipment used in the inspection of parts, components, sub-assemblies and assemblies are listed in applicable item QAPs.

4.5.2.1 Acquisition, maintenance and disposition. Unless otherwise specified (see 6.2.1), responsibility for acquisition, maintenance and disposition of inspection equipment shall be in accordance with MIL-I-45607.

4.5.2.2 Accuracy of standard measuring equipment. When commercial or modified commercial inspection equipment is used, it shall be capable of repetitive measurements to an accuracy of ten (10) percent of the total tolerance of the characteristic being inspected.

4.5.3 Materials. Materials for use in the parts shall be inspected in accordance with the applicable material specifications shown on the part drawing. Required tests may be conducted in the prime contractor's or subcontractor's facilities. The test results shall be available to the Government representative for review. Certified test reports identifiable with the material may, at the option of the Government, be accepted in lieu of tests. When the identity or quality of the material is in doubt, and in the absence of valid and acceptable test data, the supplier shall conduct or have conducted such tests within the scope of the material specifications as are required by the Government representative to determine the identity and quality.

4.5.4 Optical parts and components. The optical parts and components of the complete optical system shall be inspected by the optical procedures specified herein, MIL-G-174, MIL-C-675, MIL-A-3920, and MIL-O-13830, and such other specifications as are referenced on applicable drawings. Optical parts and components of the complete optical system shall comply with the requirements of the applicable drawings and specifications.

4.5.4.1 Surface quality. Each optical element (doublets before and after cementing) shall be inspected for digs and scratches by the method(s) specified in MIL-O-13830. Surface quality shall comply with the requirements of the applicable drawings and specifications.

4.5.4.2 Surface accuracy. The surface accuracy of the optical elements and doublets (before and after cementing), shall be determined by an interferometric comparison of each surface with the appropriate master. The number of Newton's rings observed and any irregularity of the rings or fringe pattern shall be evaluated to determine compliance with the surface accuracy (spherical rings, irregularities, etc.) requirements of the applicable drawings and specifications.

4.5.5 Optical system.

4.5.5.1 Eyepiece focus. The focusing range of the eyepiece assembly shall comply with 3.5.1 for the two axial object locations specified with each of the borescope configurations specified. This shall be measured using the procedures and equipment listed on the applicable item QAP(s) or Government approved equivalent device.

4.5.5.2 Image size. Image size shall be measured using equipment and procedures listed on the applicable item QAP(s) or with Government approved equivalent device. The size of the image shall comply with 3.5.2 for each of the borescope configurations specified.

4.5.5.3 Image location. Image location is to be measured using the procedures and equipment listed on the applicable item QAP(s) or with Government approved equivalent device. Image location shall comply with 3.5.3.1 and 3.5.3.2.

4.5.5.4 Centering and field of view. Centering and field of view requirements of 3.5.4 shall be inspected in accordance with procedures and equipment listed in the applicable item QAP(s) or with Government approved equivalent device.

4.5.5.5 Cleanliness.

4.5.5.5.1 The complete borescope shall be positioned to view a uniformly illuminated field having a brightness of approximately 300 apparent foot-candles. No opaque material shall be visible in the focal plane throughout the entire range of eyepiece movement to comply with 3.5.5.

4.5.5.5.2 The borescope sections shall be visually examined for the presence of opaque material on each lens therein by viewing the lens against a uniformly illuminated field having a brightness of approximately 300 apparent foot-candles. The area of opaque material on all lenses of the complete borescope, except the eyepiece, shall not total arithmetically to more than 1.0 square millimeter to comply with 3.5.5.

4.5.5.5.3 The complete borescope shall be disassembled into sections to visually determine any condensation of moisture. Absence of condensation shall comply with 3.5.5.

4.5.5.6 Borescope resolution test. Resolution shall be measured using equipment and procedures listed on the applicable item QAP(s) or with Government approved equivalent device. Resolution shall comply with requirements of 3.5.6.

4.5.6 Electrical system. Electrical system requirements shall be tested using equipment and procedures of applicable item QAPS. Government approved equivalent test equipment may be used. The electrical system shall comply with the requirements of 3.6.

4.5.7 Function tests. Each borescope and major subassembly shall be tested functionally. Failure of the borescope or major subassembly to function as specified in 3.7 shall be cause for rejection.

4.5.8 Marking. Items shall be visually examined to determine compliance with marking requirements specified in 3.8 and on the applicable drawings. Markings shall be complete, correct and legible.

4.5.9 Protective coatings and finishes. Appearance of protective coatings and finishes shall be visually examined for compliance with the workmanship requirements of the applicable specification designated on the drawing. The coating or finish shall be evenly deposited, uniform in color, free from pits, bare spots, or corrosion and shall not exhibit a mottled appearance.

4.5.10 Surface roughness. Surface roughness, interpreted in accordance with ANSI B46.1, shall be visually examined by direct comparison with applicable surface roughness specimens. In case of dispute, surface roughness measuring equipment approved by the Government representative shall be used.

4.5.11 Workmanship. Items shall be visually examined to determine compliance with the workmanship requirements of 3.9.

4.5.12 Inspection of packaging. Unless otherwise specified, inspection to determine compliance with cleaning, preservation, packaging, and marking requirements of the applicable Special Packaging Instructions (SPI) AM11584701, for the level of protection specified in the contract shall be as specified in MIL-P-14232.

5. PACKAGING

5.1 First article package. On each contract, a first article package shall be provided in accordance with 3.2. The first article package for the borescope shall be unit packaged for level of protection specified in the contract and packed level B. Unit packaging and packing shall be in accordance with MIL-STD-2073-1 and Special Packaging Instructions (SPI) AM11584701. Marking shall be in accordance with MIL-STD-129 and special markings SPI AM11584701.

5.2 Unit packaging, packing and marking of the borescope. The borescope shall be unit packaged and packed in accordance with the requirements of MIL-STD-2073-1 and SPI AM11584701 for the level of protection specified in the contract (see 6.2). Marking shall be in accordance with MIL-STD-129 and special marking instructions of SPI AM11584701. When specified (see 6.2), bar code marking shall be in accordance with MIL-STD-1189.

5.3 Unit packaging, packing and marking of repair parts. Repair parts shall be unit packaged and packed in accordance with the requirements of MIL-STD-2073-1 and the applicable SPI for the level of protection specified in the contract (see 6.2). Marking shall be in accordance with MIL-STD-129 and special marking instructions of SPI AM11584701. When specified (see 6.2), bar code marking shall be in accordance with MIL-STD-1189.

6. NOTES

6.1 Intended use. The M3 Borescope is used to visually inspect cannon bores, 58MM (2.3 in.) to 203.2MM (8 in.) in diameter. Three extension tube assemblies containing the appropriate optical systems are provided as part of the M3 package to permit inspection of bores having lengths up to approximately 26 feet. This length could be increased through the use of additional extension tube assemblies. Support rings are provided to center the borescope.

6.2 Ordering data. Acquisition document should specify the following:

6.2.1 Acquisition requirements.

- a. Title, number and date of this specification.
- b. Submission of shipping instructions and related data for the first article (see 3.2, 4.4, and 5.1).
 - (1) When contractor inspection differs from Government inspection, the contract should designate the examinations and tests to be performed by the contractor and the examinations and tests to be performed by the Government (see 4.1, 4.1.1, and 4.4).
 - (2) The contract should specify the sample size (number of units) of the first article; and should also specify the sample size (number of units) of supplemental items, if any, to the first article.
 - (3) The contract should designate the inspection and test data that is required to be furnished to the Government when the contractor is required to perform either, or both, examinations or tests.
 - (4) The contract should designate at whose expense a retest may be performed.
 - (5) The contract should specify that the acceptable first article shall be delivered in accordance with the terms of the contract.
 - (6) The contract should specify and identify any additional or extended examinations and tests beyond the scope of this specification as a separate item of the contract.
- c. The lot number shall be engraved on major items.
- d. The serial number shall be applied to the borescope case.
- e. When applicable, the contract should specify the sampling plan for repair parts.
- f. The levels of preservation, packaging and packing required for borescope assemblies (see 5.2) and for repair parts (see 5.3).

6.2.2 Data requirements. Monthly reports of the results of final examination and performance testing shall be specified for delivery on DD Form 1423 in the contract.

6.2.3 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL), the data requirements identified below shall be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved CDRL incorporated into the contract. When the provisions of DOD FAR Supplement, Part 27, Sub-Part 27.410-6 are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification are cited in the following paragraphs:

<u>Paragraph No.</u>	<u>Data Requirement Title</u>	<u>Applicable DID No.</u>
4.4.2	First Article Inspection Report	DI-T-4902

(Data Item Descriptions related to this specification, and identified in Section 6 will be approved and listed as such in DoD 5000.19L, Vol. II, AMSDL. Copies of Data Item Descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the Procuring Contracting Officer.)

6.3 Waivers and deviations. The Procuring Contracting Officer (PCO) shall coordinate all requests for waiver or deviation to this specification with the Product Assurance Directorate at Watervliet Arsenal.

6.4 Subject term (key word) listing.

Borescope

Optical system

6.5 When warranted, the contract should specify the application of MIL-Q-9858 or MIL-I-45208, as appropriate, on the Management Control Systems Summary List, DD Form 1660.

6.6 Unless otherwise specified, the contract should specify the application of MIL-I-45607 and MIL-STD-45662 on the Management Control Systems Summary List, DD Form 1660.

6.7 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:

Army--AR

Review Activity:

Army--AR

User Activities:

Navy--MC

Preparing Activity:

Army--AR

Project No. 6650-A155